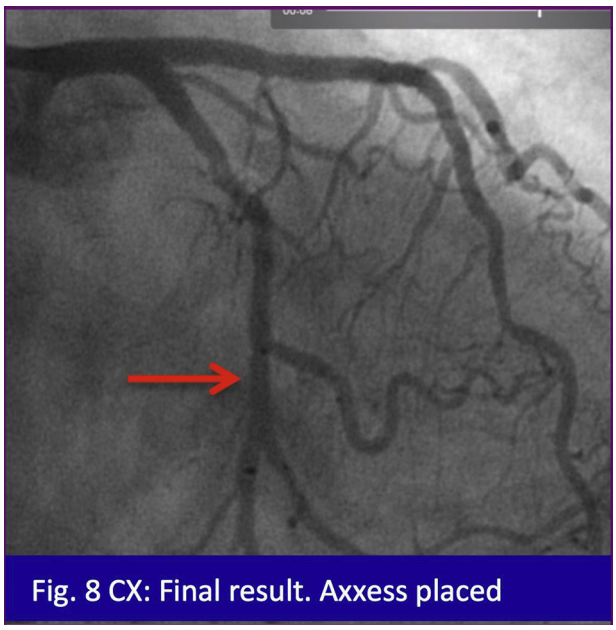

Fig. 8 CX: Final result. Axxess placed

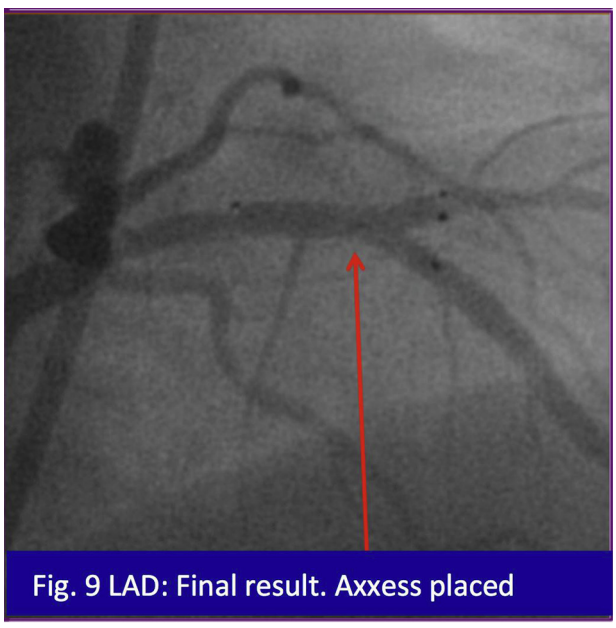

Fig. 9 LAD: Final result. Axxess placed

TCTAP A-034

Is Final Kissing Ballooning Mandatory in the Treatment of Distal Left Main Disease Treated by Simple Cross Over Stenting?

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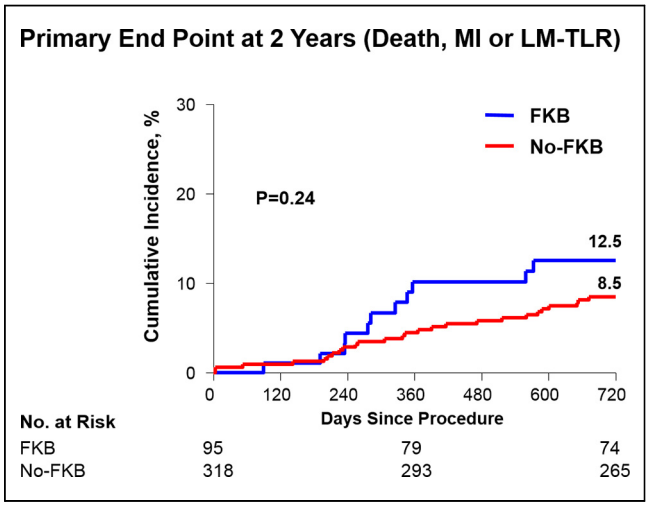
BACKGROUND Single stent approach and selective side branch intervention has demonstrated better clinical outcomes compared with double stent technique to the long term follow up for bifurcation coronary artery disease treatment. Currently, recommended treatment of complex unprotected left main (UPLM) coronary artery is CABG and particularly distal bifurcation lesion of UPLM was shown higher incidence of adverse events compared with shaft lesion, but these data are derived with prior verifying single stent technique improved better clinical outcomes. UPLM stenting with single drug eluting stent (DES) with a strategy of provisional side-branch procedure provided good angiographic result and may be associated with better clinical outcomes. In the single stent strategy of bifurcation lesions, final kissing ballooning (FKB) after stenting of the main vessel (MV) cross the side branch (SB) was not associated better outcomes and routine FKB would rather be harmful, but most of the studies did not enroll left main bifurcation lesions. At the treatment left main bifurcation lesions with simple stenting cross over left circumflex artery, the role of routine FKB after simple cross over stenting was not evaluated. The purpose of present study evaluate whether routine FKB of bifurcation level of left main coronary improve clinical outcomes in patients who had been treated simple cross over stenting of large, single center left main coronary disease registry.

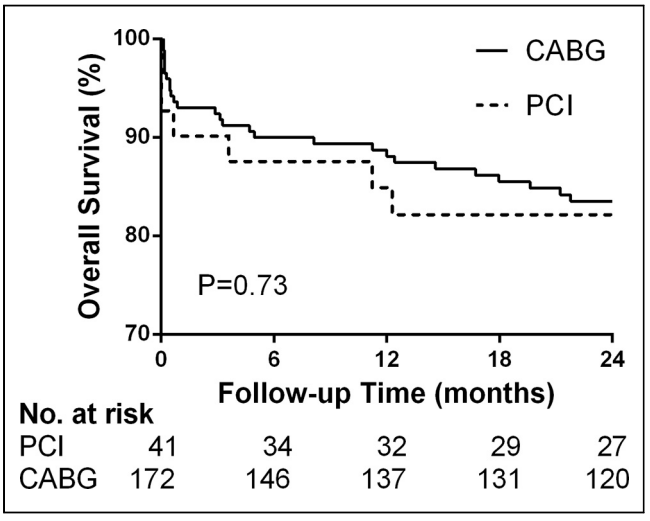
METHODS Between January 2003 and May 2012, a total of 413 patients having distal left main treated by simple stenting with DES cross over left circumflex artery were identified from ASAN-MAIN registry. In patients treated with the simple crossover stenting, major adverse cardiac events (MACE; The composite of death from any causes, myocardial infarction (MI), or left main-target lesion revascularization (LM-TLR)) were compared between those undergoing main vessel stenting only (No-FKB group, n=318) or those undergoing FKB after main vessel stenting (FKB 3group, n=95) at 2 year follow-up.

RESULTS The2-year incidence of MACE was similar between two groups (FKB: 12.5% vs. No FKB: 8.5%, P=0.24). In addition, death (4.6% vs. 3.9%, P=0.80), MI (0% vs. 0.7%, P=0.40), and left main TLR was not significantly different (FKB: 8.1% vs. NoFKB: 4.4%, P=0.15). After adjustment, the hazard ratio was 0.95 (0.26 - 3.51)(95% CI, P=0.96) for the composite of death or MI; 1.32 (0.46 - 3.75) (95% CI,P=0.60) for left main TLR; 1.10 (0.49 - 2.49) (95% CI, P=0.82) for MACE.

	FKB (N=95)	Non-FKB (N=318)	Adjusted HR (95% CI)†	P value
Death	4 (4.6%)*	12 (3.9%)	1.03 (0.28-3.82)	0.97
MI	0	2 (0.7%)	infinite	0.96
Death or MI	4 (4.6%)	13 (4.2%)	0.95 (0.26-3.51)	0.96
Any RR	9 (10.5%)	20 (6.7%)	0.99 (0.41-2.38)	0.98
TVR	7 (8.1%)	14 (4.8%)	1.12 (0.40-3.11)	0.83
LM-TLR	7 (8.1%)	13 (4.4%)	1.32 (0.46-3.75)	0.60
Definite ST	0	0	NA	NA
MACE‡	11(12.5%)	26(8.5%)	1.10 (0.49-2.49)	0.82

*Derived from Kaplan-Meier estimate
†Adjusted for age, DM, clinical presentation, stent number, pre-procedural LCX DS, post-stenting LCX DS
‡MACE defined as the composite of death, MI, or LM TLR





CONCLUSION Inpatients treated with the simple cross over stenting for distal LMCA bifurcation stenosis, FKB after main vessel stenting was not associated with better clinical outcome compared with no FKB.

TCTAP A-035

Left Main Revascularization for Patients with Reduced Left Ventricular Ejection Fraction; Comparison of Outcome After PCI Versus CABG from ASAN-MAIN Registry

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BACKGROUND Unprotected left main coronary artery (ULMCA) stenting has been investigated as an alternative to coronary artery bypass grafting (CABG). However, long-term benefits of PCI or CABG in patients with ULMCA disease and reduced left ventricular ejection fraction (LVEF) have not been established. The purpose of this study was to compare the results of patients with ULMCA disease and reduced LVEF undergoing PCI versus CABG.

METHODS We evaluated 42 patients with ULMCA disease (more than 50% stenosis by visual estimation) and systolic LV dysfunction (LVEF less than 40%) who underwent PCI and 171 patients who underwent CABG in Asan Medical Center from March 1992 to February 2011. Event rates at 2 years were compared between the two groups.

RESULTS Preprocedural LVEF was not different between PCI and CABG (34.29 ± 5.9 vs. 32.4 ± 6.2%, P=0.10). The CABG group included more patients with triple-vessel disease (P<0.001) and the PCI group included more patients with myocardial infarction(MI) (P=0.002). The rates of target-vessel revascularization were significantly higher in the group that received PCI than in the group that underwent CABG (P=0.003). The composite rate of death, MI, stroke, or target vessel revascularization at 2 years occurred in 19.5% of the PCI group and 17.4% of the CABG group (adjusted hazard ratio, 1.06; 95% CI, 0.46 to 2.46; P =0.89).

CONCLUSION In patients with ULMCA disease and reduced LVEF, we found no significant difference in rates of the composite end point between patients receiving PCI and those undergoing CABG at 2 year follow-up.

TCTAP A-036

Two-Stent Strategies for Coronary Bifurcation Lesions: Main Vessel First Versus Side Branch First

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BACKGROUND Although main vessel (MV) stenting with provisional side branch (SB) treatment is regarded as a standard strategy for coronary bifurcation lesions, two-stent strategies are needed substantially in real-world practice and cross-overs from one-stent to two-stent strategies were observed frequently in randomized controlled trials. However, there are limited data comparing different methods of two-stent strategies. We sought to compare two-stent strategies for coronary bifurcation revascularization using a MADS classification: main across side first or SB first techniques.

METHODS Consecutive patients who underwent drug-eluting stents implantation for bifurcation lesions with SB ≥2.3 mm were enrolled. We selected 673 patients treated with two-stent strategies including main across side first or SB first techniques. The primary outcome was major adverse cardiac events (MACE: cardiac death, myocardial infarction, or target lesion revascularization).

RESULTS SB first techniques were performed in 423 (62.9%) patients. SB occlusion (3.8% versus 12.0%, p<0.001) and SB dissection (0.5% versus 8.4%, p<0.001) occurred less frequently in patients treated with SB first techniques, and peri-procedural myocardial infarction was observed similarly in two groups (16.7% versus 15.0%, p=0.66). During median 3-year follow-up, the rate of MACE was similar in two groups (15.1% vs. 15.6%; adjusted hazard ratio, 1.02; 95% CI, 0.62-1.67; p=0.95). In multivariable analysis, independent predictors of SB first techniques were greater pre-procedural percent diameter stenosis of the SB than the MV (odds ratio [OR], 2.21; 95% confidence interval [CI], 1.54-3.20; p<0.001) and SB lesion length >7.3mm (OR, 1.76; 95% CI, 1.24-2.50; p=0.002).

CONCLUSION The clinical outcomes were similar for patients with coronary bifurcation lesions treated with main across side first or SB first two-stent techniques. SB first two-stent techniques could be considered in patients with more severe stenosis of the SB than MV and SB lesion more extending from the ostium.

TCTAP A-037

Rotational Atherectomy with Cutting Balloon for Treatment of High Risk Calcified Left Main Coronary Lesions

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BACKGROUND Heavily calcified left main coronary disease is one of the most challenging in percutaneous coronary intervention. Coronary artery bypass surgery is considered the gold standard treatment in this setting. However, more and more patients decline or high risk